

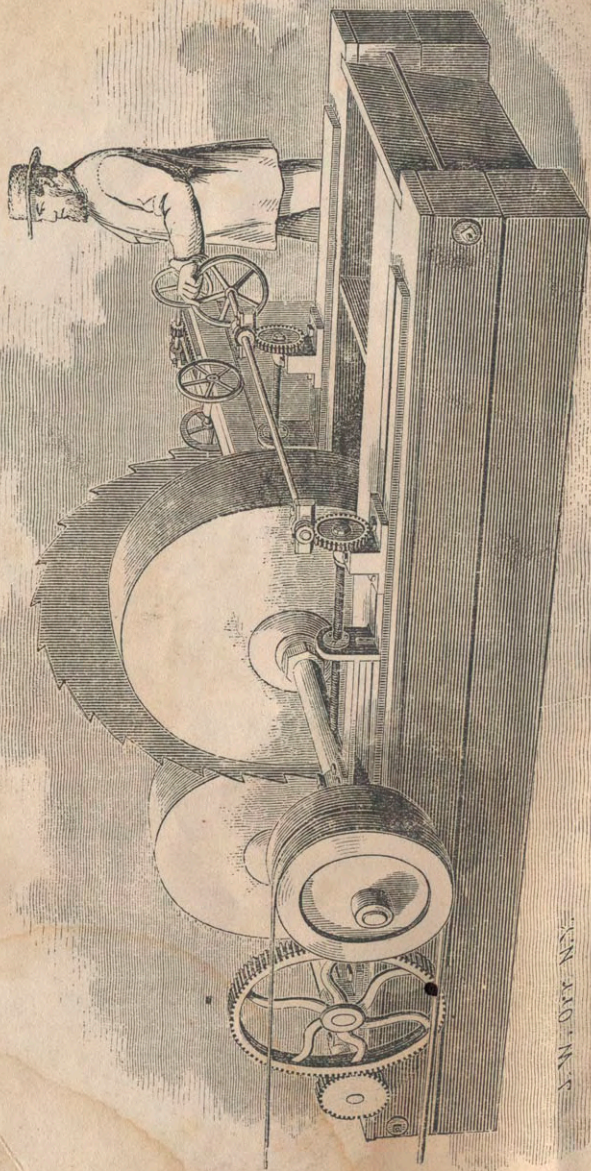
WHEELER WADEN & BAKWELL  
SAW  
MANUFACTORY.

1833

MONHAGEN SAW

J.W. Orr N.Y.

MONHAGEN SAW WORKS,  
MIDDLETOWN, ORANGE COUNTY, N. Y.



S. W. ORR N.Y.



WHEELER, MADDEN & BAKEWELL,

MANUFACTURERS OF WARRANTED

PATENT GROUND,

EXTRA CAST STEEL

CIRCULAR SAWS,

MILL, MULAY,

CROSS-CUT, HAND, PANEL

AND RIP SAWS,

BUTCHER'S BOW SAWS, BACK SAWS,

WOOD SAWS, FELLOE AND TURNING WEBS,

AND PLASTERING TROWELS.

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MANUFACTORY,

At Middletown, Orange County, N. Y.

BRANCH OFFICE AND WAREHOUSE,

No. 30 Platt Street, New York.

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MIDDLETOWN, N. Y.:

THE "PRESS" PRINTING ESTABLISHMENT, EXCHANGE BUILDING.

1859.

# OFFICE MONHAGEN SAW WORKS.

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Middletown, Orange Co., N. Y.,

January 1st, 1859.

Gents :

We have the pleasure of presenting you herewith our *New List of Prices of Cast Steel* **PATENT GROUND SAWS**, and other goods manufactured by us.

Our Saws are sold by the principal Hardware Merchants in the United States and Canada ; but if any description of Saw cannot be found at hand, an order directed to us by mail will receive prompt attention.

Our motto is "Excelsior," and while we shall use every exertion in our power to make all goods bearing our stamp at least equal to any manufactured in America or England, we shall still be willing to sell at the lowest possible price.

You will see by annexed List of Prices that we have made a reduction in price on nearly all goods manufactured by us.

Hoping to receive a share of your patronage, we remain

• Your most obedient Servants,

WHEELER, MADDEN & BAKEWELL.



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# DIRECTIONS

FOR

## SETTING AND SHARPENING

### CIRCULAR SAWS.

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BEFORE the saw is set, the side towards the log should be perfectly flat, and all the difference in thickness between the outer edge and the middle of the saw must be on the side next to the board, so that the log may pass without pressing against the body of the saw ; therefore, the flange that is fast on the mandrel should be a little concave, and the loose flange perfectly flat. If the saw is not in the required shape when screwed up between the flanges, it may be adjusted by packing between the flanges and the saw with writing paper.

After the saw is made to run as true as possible sidewise, turn it backwards slowly against a file that is held firmly on an immovable bearing. This operation will trim off the longest teeth, and leave the points all equally distant from the centre; then file off the top of the tooth until the facet made by the jointing-file is but just perceptible at the point, and the saw is prepared for setting.

To set the saw we use a crotch-punch of hardened steel, and a riveting hammer that weighs about a pound. The angle of the punch should be a trifle greater than that of

the point of the tooth, and a little convex lengthwise of the groove (see cut No. 6,) so as to spread the point of the tooth from the centre both ways. Hold the punch against the point of the tooth parallel with the side of the saw, and with repeated moderate blows of the hammer upset the points of the tooth equally on both sides to the required breadth. To support and strengthen the cutting edge after the teeth are upset enough, we may with considerable advantage draw out the top of the tooth with the riveting-hammer, while a piece of iron fitted into the space below is held firmly with a perfect bearing under the hammer.

The teeth of circular saws for ripping should be pitched forward as much as they can be, and leave sufficient strength of tooth and space for saw-dust; and the number of teeth should be proportioned to the hardness of the timber to be sawed, say for a 48 inch saw 30 teeth for hard wood, and 24 for soft.

For a saw of 48 inches diameter and 30 teeth, the pitch\* of the teeth may be determined as follows: describe a circle from the centre of the saw equal to one-half of its diameter, and a line drawn from the point of the tooth across the saw, touching the outside of the circle, will give the pitch. For 24 teeth, the circle may be five-eighths of the diameter of the saw.

The back or top of the tooth for about an inch back from the point, should be on a line drawn from the point back to the next tooth, and as much below the point of that tooth as each tooth is required to cut. For instance,

\* By the pitch of saw-teeth we mean the inclination of the face of the tooth up which the shaving ascends. The distance from point to point, we call the space.



if your feed is equal to  $1\frac{1}{2}$  inches to one revolution of the saw, and the saw has 30 teeth, each tooth must cut one-twentieth of an inch. After the saw is set as directed, the teeth must be filed up sharp, finishing with a fine, single-cut file. The cutting-edge of each tooth should be parallel with the centre of the mandrel, and the front and back of the teeth kept on the lines as described, and shown in the cuts No. 1 and No. 2.



## DIRECTIONS FOR SETTING AND SHARPENING MILL SAWS.

Mill Saws, with teeth such as are shown on plate 3, after being straightened on the edge, must be set and sharpened in the same manner as Circulars. The pitch of the teeth is 60 degrees.

Plate 4. Another form of tooth and plan of setting and sharpening not so good as No. 3, but a great deal better than the old plan, as shown in plate 5. In this case, after the saw is straightened on the edge, the teeth are filed sharp at the points like a cross-cut saw, alternately highest on the outside, and then upset with the punch.

Plate 5. This is the oldest, most in use, and, we think, the most objectionable plan for setting a circular or vertical

mill-saw, and is so well understood among sawyers as to require no description from us. In this case, after the tooth is worn off so as to be thinner at the point, it may be spread out to its original thickness with the crotch-punch.

Plate 6. Crotch-punch, for widening the points of saw teeth.

Plate 7. This tool is made in three pieces. The parts A and B are made of steel, nicely fitted and hardened, and are bound together with the iron band C. It is used to widen the points of saw teeth when they have become worn and blunted on the corners, and may be used without the necessity of filing the saw afterwards.

If these rules are strictly observed, the saw will always balance, and there will be no occasion for using a Gumming machine.



PLATE No. 1.

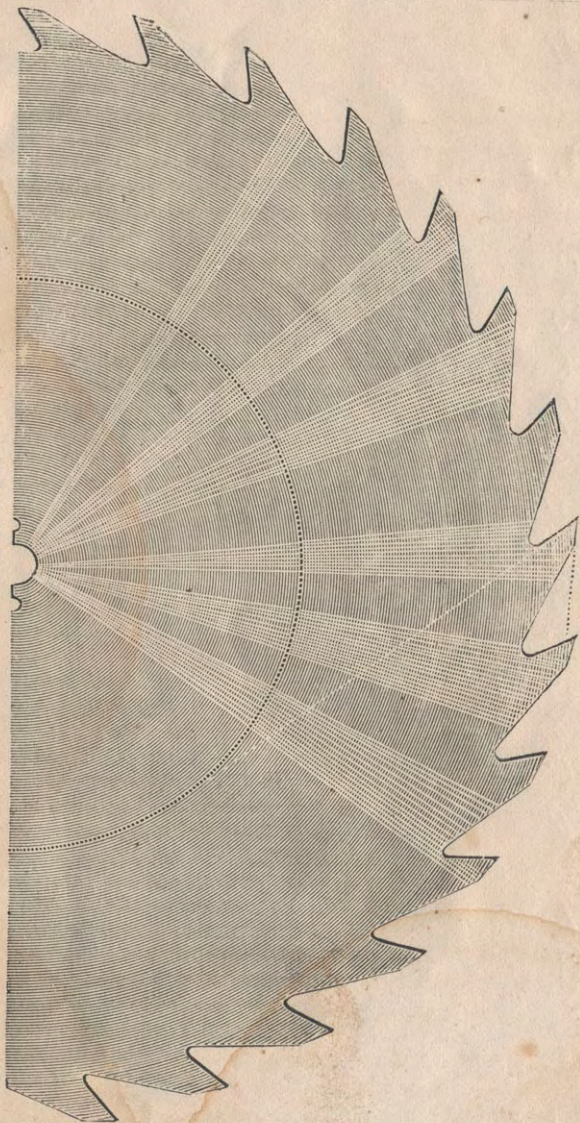
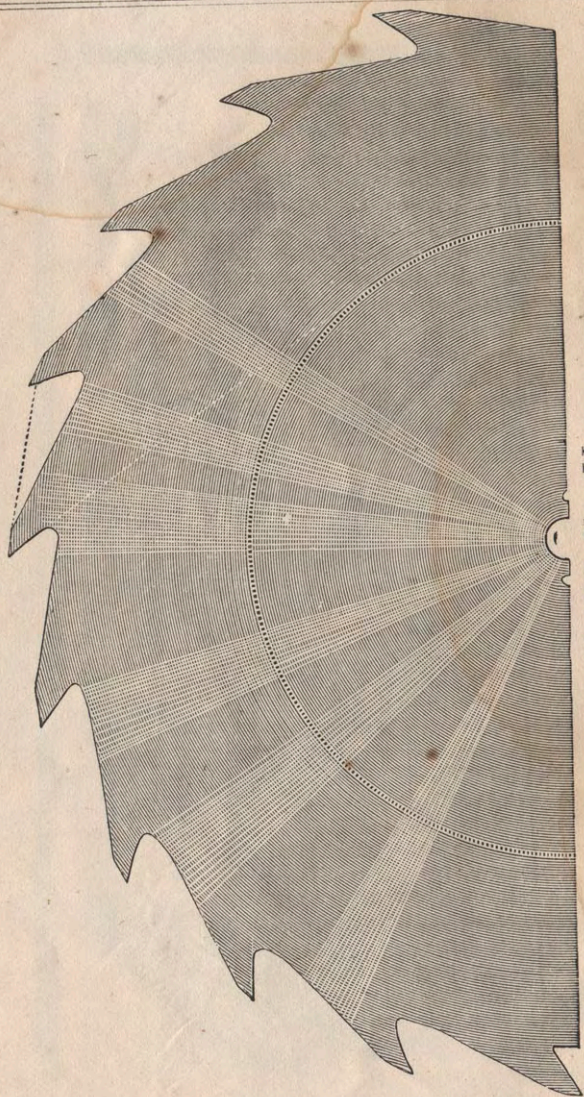


PLATE No. II.





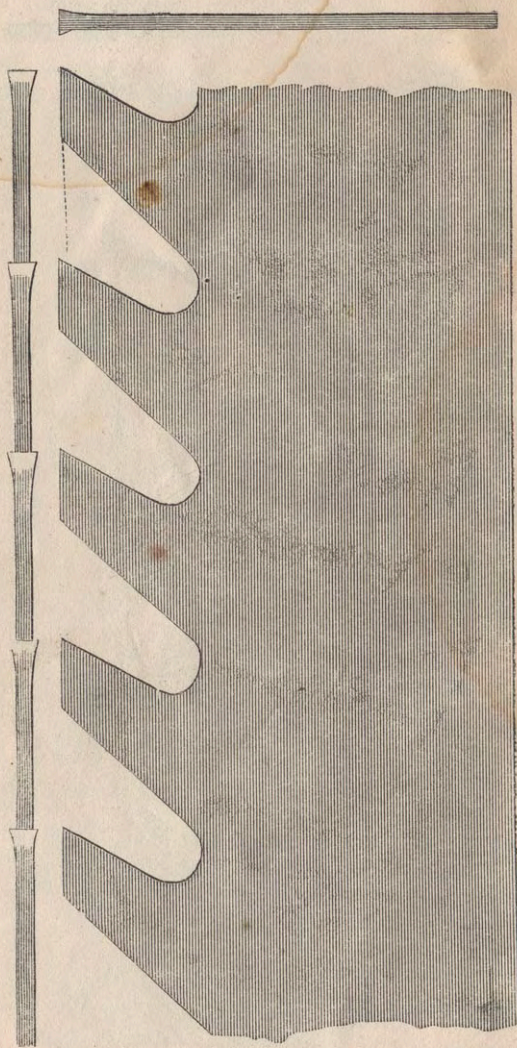
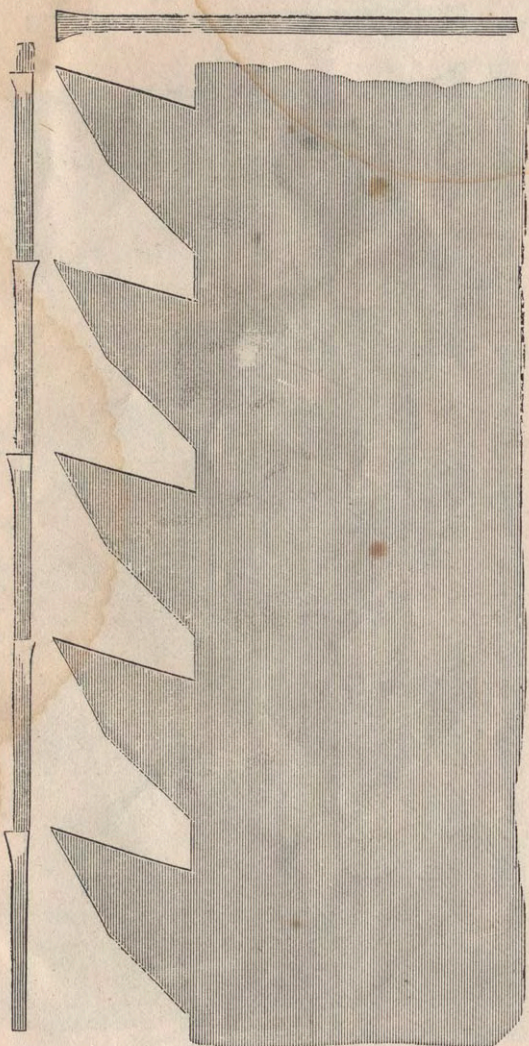


PLATE No. III.

PLATE NO. IV.





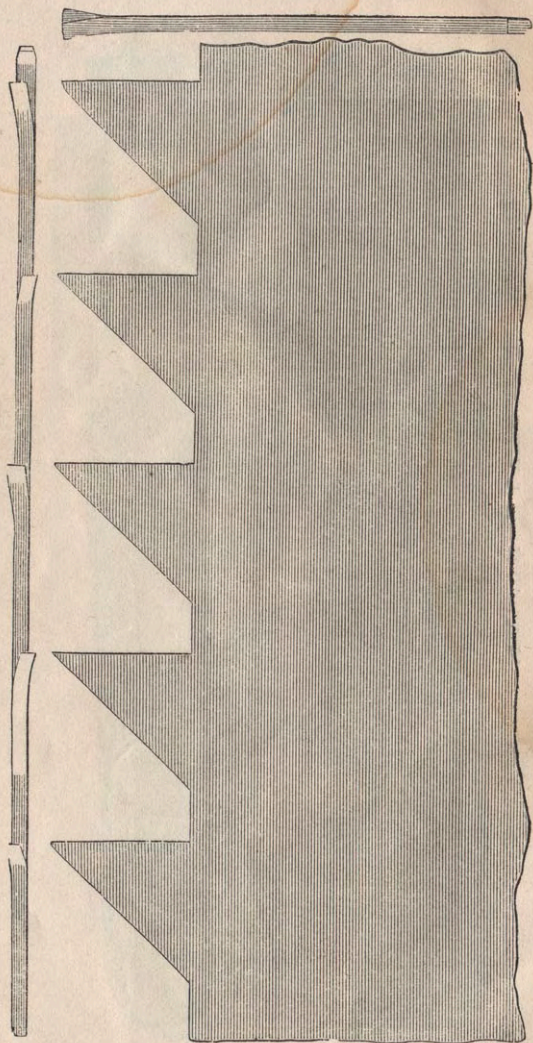


PLATE No. V.



PLATE No. VI.



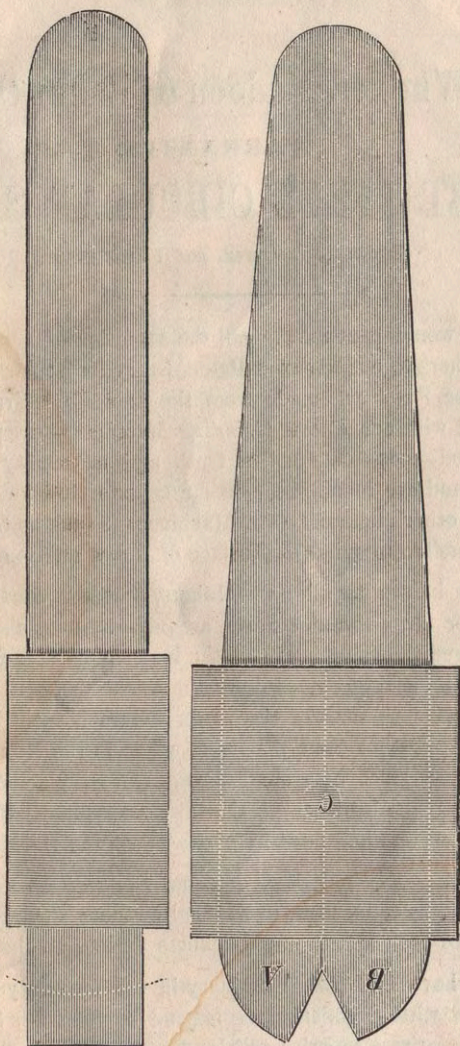


PLATE No. VII.

# Wheeler, Madden & Bakewell's

## WARRANTED

### CAST STEEL CIRCULAR SAWS

Hardened, Tempered, and Patent Ground.

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We would particularly call the attention of Lumbermen and others to our annexed PRICE LIST of Circular Saws.

These Saws are made from the BEST CAST STEEL—are ground with our *Patent Grinding Machinery*—are perfectly balanced—possessing entire truth and uniformity of surface—and are in all respects far superior to Saws ground in any other manner. Our Machinery is such as to render it impossible to grind the surface of a saw unevenly.

It is known to all Saw Makers, that the Steel Plates used for large Circular Saws, are almost invariably rolled of uneven thickness. Hence the importance of a Machine that will unerringly grind down the thicker before it touches the thinner portions of the plate. Ours is such, being so constructed, that after placing a plate in the Machine, all unevenness must be ground down, before the stone can affect the general surface of the saw; consequently the plate, after being ground, must be *absolutely even* in thickness.

We can grind our Saws of equal thickness from the cutting edge to the centre, or gradually reduce them from the centre to the edge, to any thickness desired on the tooth.

We have had this Machinery in use for one year, and can now with confidence recommend our Circular Saws to all who desire a superior article at a reasonable price.



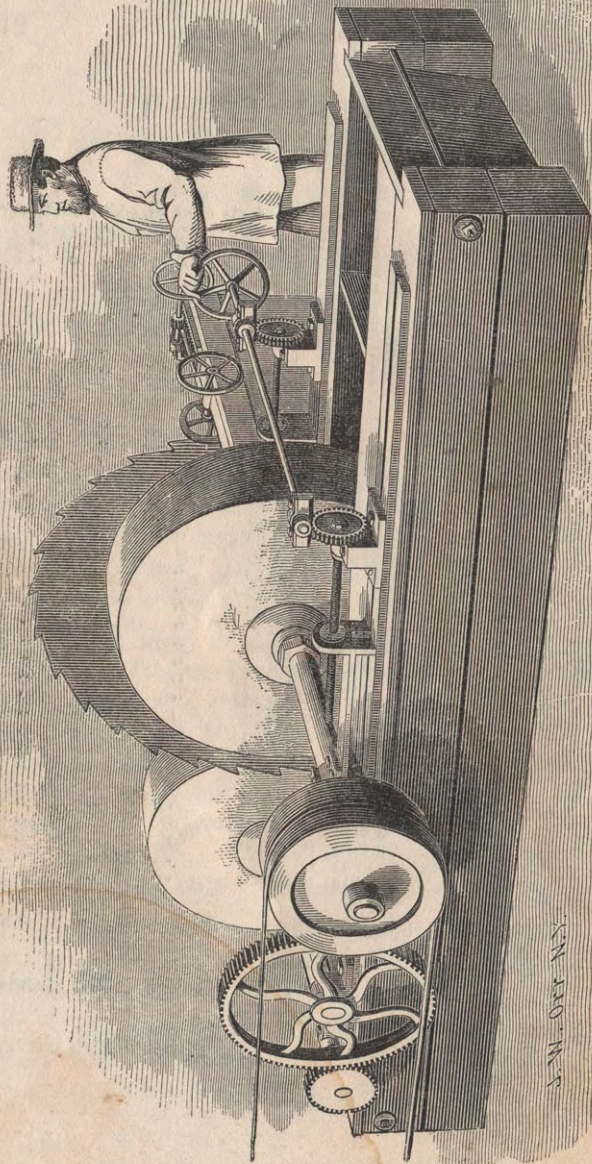
## PRICE LIST.

Diameter.	Thickness.		
4 inch,	19 Gauge,	\$0 75 each.	4 cts extra ea. additional Gauge.
5 "	19 "	1 00 "	5 "
6 "	18 "	1 17 "	6 "
7 "	18 "	1 33 "	7 "
8 "	18 "	1 58 "	8 "
9 "	17 "	1 83 "	10 "
10 "	16 "	2 17 "	12 "
12 "	16 "	2 67 "	15 "
14 "	15 "	3 33 "	18 "
16 "	15 "	4 00 "	22 "
18 "	14 "	5 00 "	27 "
20 "	13 "	6 00 "	32 "
22 "	12 "	7 00 "	38 "
24 "	12 "	8 00 "	43 "
26 "	12 "	9 33 "	55 "
28 "	11 "	11 00 "	60 "
30 "	11 "	12 67 "	70 "
32 "	10 "	14 67 "	85 "
34 "	10 "	17 33 "	\$1 00 "
36 "	10 "	20 00 "	1 15 "
38 "	9 "	25 00 "	1 35 "
40 "	9 "	30 00 "	1 85 "
42 "	9 "	36 00 "	2 00 "
44 "	7 to 8 "	43 00 "	2 40 "
46 "	6 to 7 "	50 00 "	2 85 "
48 "	6 to 7 "	60 00 "	3 35 "
50 "	6 to 7 "	70 00 "	3 95 "
52 "	6 to 7 "	84 00 "	4 75 "
54 "	5 to 6 "	100 00 "	5 75 "
56 "	5 to 6 "	125 00 "	7 00 "
58 "	5 to 6 "	150 00 "	8 50 "
60 "	5 "	175 00 "	10 00 "
62 "	5 "	200 00 "	11 50 "
64 "	5 "	230 00 "	13 00 "
66 "	5 "	255 00 "	14 50 "
68 "	5 "	285 00 "	16 00 "
70 "	5 "	310 00 "	17 50 "
72 "	5 "	335 00 "	19 00 "

For sizes of holes in Circular Saws, see dimensions of Mandrels on another page.

The thickness by Stubb's Wire Gauge is the standard referred to above for Circular Saws.

We vary the thickness somewhat without extra charge.



PATENT SAW GRINDING MACHINE.

J. W. ORR & CO.



**Warranted Cast Steel Mill Saws.**

EXTRA TEMPERED—PATENT GROUND.

Length,	5	5½	6	6½	7	7½	8	8½	feet.
Price, 8th gauge,	\$5 00	5 50	6 00	6 50	7 00	7 50	8 00	8 50	each.
“ 7th “	5 50	6 05	6 60	7 15	7 70	8 25	8 80	9 35	“
“ 6th “	6 00	6 60	7 20	7 80	8 40	9 00	9 60	10 20	“
“ 5th “	6 50	7 15	7 80	8 45	9 10	9 75	10 40	11 05	“

Gang Saws, 10th, 11th, and 12th gauge, 95 cents per foot.  
If set and sharpened, 12½ cents per foot extra.

**Warranted Cast Steel Mulay Mill Saws.**

EXTRA TEMPERED—PATENT GROUND.

Length,	6	6½	7	7½	8	feet.
12 inches wide, 7th gauge,	\$10 50	11 38	12 25	13 13	14 00	each.
“ 6th “	11 25	12 19	13 13	14 07	15 00	“
“ 5th “	12 00	13 00	14 00	15 00	16 00	“
“ 4th “	12 75	13 81	14 88	15 94	17 00	“
11 inches wide, 7th “	9 90	10 73	11 55	12 38	13 20	“
“ 6th “	10 50	11 38	12 25	13 13	14 00	“
“ 5th “	11 15	12 05	13 00	13 95	14 85	“
10 inches wide, 7th “	9 30	10 08	10 85	11 63	12 40	“
“ 6th “	9 90	10 73	11 55	12 38	13 20	“
“ 5th “	10 30	11 15	12 00	12 85	13 75	“

Mulay Mill Saws, 14 inches wide, 5th gauge, \$2 40 per foot.  
If set and sharpened, 12½ cents per foot extra.  
The thickness by Stubb's Wire Gauge, is the standard referred to  
above for Mill and Mulay Saws.

**Warranted Cast Steel Butting or Drag Saws.**

Length,	5	5½	6	6½	7	feet.
Price—Mill Saw size,	\$5 00	5 50	6 00	6 50	7 00	each.
“ Tapered,	4 38	4 80	5 25	5 70	6 13	“

Tapered Saws, 7½ inches wide butt; 5 inches wide point.  
In ordering Drag Saws, state whether Mill Saw or Cross-cut teeth  
are wanted.  
Any other size wanted made to order.

**Warranted Extra Tempered Pit Saws.**

Length,	6	6½	7	7½	8	feet.
Price,	\$5 50	6 00	6 75	8 00	9 50	each.

**Warranted Cross Cut Saws, No. 1.**

CAST STEEL—EXTRA TEMPERED.

4 feet,.....	\$2 75	7 feet,.....	\$4 83
4½ ".....	3 10	7½ ".....	5 55
5 ".....	3 45	8 ".....	6 40
5½ ".....	3 80	8½ ".....	7 40
6 ".....	4 14	9 ".....	8 55
6½ ".....	4 50		

Longer sizes made to order. The above are filed and set.

**Cast Steel Cross Cut Saws, No. 2.**

4 feet,.....	\$2 12 each.	7 feet,.....	\$3 71 each.
4½ ".....	2 39 "	7½ ".....	4 35 "
5 ".....	2 65 "	8 ".....	5 12 "
5½ ".....	2 92 "	8½ ".....	5 95 "
6 ".....	3 18 "	9 ".....	6 93 "
6½ ".....	3 45 "		

See description of above Saw on another page.

**Hook Tooth Cross Cut Saws.**

Tuttle's Patent, 87 cents per foot, filed and set.

Bakewell & Co.'s 77 cents per foot, filed and set.

**Billet Webs, or Wood Saws,**

WITH FRAMES COMPLETE—READY FOR USE.

No. 1,	30 inches long, with frame,	Price, \$12 20 per doz.
" 2,	30 " " "	11 00 "
" 3,	30 " " "	9 50 "
" 4,	30 " " "	8 50 "

The above are in packages of one dozen.



### Warranted Cast Steel Billet or Wood Cutters' Webs.

Length,		28	30	32	34	inches.
No. 1	Plain, (Spring Steel,)	\$7 25	7 75	8 25	8 75	per doz.
" 1	Set and sharpened, "	8 25	8 75	9 25	9 75	"
" 2	Plain, (Cast Steel,)	6 20	6 67	7 10	7 60	"
" 2	Set and sharpened, "	7 10	7 57	8 00	8 50	"
" 3	Plain, "	4 90	5 25	5 60	6 00	"
" 3	Set and sharpened, "	5 65	6 00	6 35	6 75	"
" 4	Plain, "	4 25	4 50	4 80	5 20	"
" 4	Set and sharpened, "	4 85	5 10	5 40	5 80	"

### Butchers' Bow Webs.

Length, (Wide,)	14	16	18	20	22	24	inches.
Price,	\$5 00	5 35	6 10	6 80	7 50	8 20	per doz.
(Narrow,)	4 65	5 00	5 35	6 10	6 80	7 50	"

### Extra Cast Steel Felloe Webs.

BEVELED BACKS—FILED AND SET.

Length,	16	18	20	22	24	26	inches.
Price,	\$4 80	5 40	6 00	6 60	7 20	7 80	per doz.
Length,	28	30	32	34	36		inches.
Price,	\$8 40	9 00	9 60	10 20	10 80		per doz.

### Cast Steel Turning or Chair Webs.

BEVELED BACKS—FILED AND SET.

Length,	12	14	16	18	20	22	24	26	28	30	inches.
Price,	\$2 32	2 80	3 20	3 65	4 15	4 70	5 30	6 00	6 80	7 75	pr doz.

### Cast Steel Key Hole or Fret Saw Blades.

BEVELED BACKS.

Assorted, 6 to 12 inches, set and sharpened, \$2 30 per dozen.

## PRICE LIST OF SAWS.

## Cast Steel Iron Webs or Hack Saws.

Length,	6	8	10	12	14	16	inches.
Price,	\$2 50	3 00	4 00	4 75	5 75	6 60	per doz.

## Hand, Panel, and Ripping Saws.

EXTRA TEMPERED.

Length,	14	16	18	20	22	24	26	28	30	in.
No. 33, (double ref'd spring steel,) .....							\$23 50	25 50	28 00	doz.
" 35, ... " .....							26 50	28 50	30 50	"
" 37, ... " .....							36 00	39 00	42 00	"
" 25, (s.s.) 10 25 11 40 12 65 13 95 17 53 19 21							20 50	22 75	25 00	"
" 27, " .....							24 00	26 00	28 00	"
" 29, " .....							25 50	28 00	30 50	"
" 31, " .....							28 00	30 50	33 00	"
" 18, " 8 80 9 90 11 20 12 55 14 10 15 78 17 45 19 45										"
" 20, " 9 05 10 20 11 55 12 95 14 55 16 28 18 00 20 05										"
" 21, " .....							20 00	22 00		"
" 23, " .....							20 50	22 50		"
" 11, (c.s.) .....							12 60			"
" 13, " 7 90 8 50 9 60 10 40 11 40 12 25 13 00										"
" 15, " .....							15 00			"
" 17, " .....							15 50			"
" 1, " 6 85 7 25 7 63 8 00 8 40 8 75 9 15										"
" 3, " .....							9 65			"
" 5, " .....							10 70			"
" 7, " .....							11 05			"
" 8, " .....							10 70			"
" 10, " .....							13 70			"

For description of Hand, Panel, Rip, Back, and some other kinds of Saws, see another page.

## Gents' Half Back Saws.

BRASS BACK.

Length,	16	18	20	inches.
Price, (Spring Steel,) \$16 80		19 20	21 60	per dozen.



**Back Saws.**

Length,	8	10	12	14	16	18	inches.
No. 1, (s. s. brass back)	\$16 75	19 20	21 60	24 63	28 80	31 20	per doz.
No. 2, (s. s. blued back)	\$12 95	14 85	17 15	19 05	21 35	24 00	per doz.
" 3, " " .....			18 40	20 30	22 60	.....	"
" 4, " " .....		10 70	12 20	14 50	16 00	17 90	19 80
" 5, " " .....			15 70	17 20	19 10	.....	"

**Compass or Lock Saws.**

BEVELED BACKS.

Length,	8	10	12	14	16	18	in., set and sharpened.
Price (cast steel)	\$3 60	4 20	4 80	5 10	5 40	6 00	per dozen.

**Butchers' Bow Saws.**

WARRANTED EXTRA CAST STEEL, (SET AND SHARPENED.)

Length of Blade,	14	16	18	20	22	24	inches.
No. 1, Best Flat Back,	\$20 00	21 00	22 00	23 00	24 00	25 00	per doz.
" 2, " Oval "		17 40	18 60	19 80	21 00	22 20	"
" 3, " Flat "	12 00	12 90	13 80	14 70	15 60	16 80	"
" 4, " Oval "	12 00	12 90	13 80	14 70	15 60	16 80	"
" 5, " Flat "	12 70	13 60	14 50	15 40	16 30	17 50	"
" 6, " Oval "	12 70	13 60	14 50	15 40	16 30	17 50	"

**Cast Steel Plastering Trowels.**

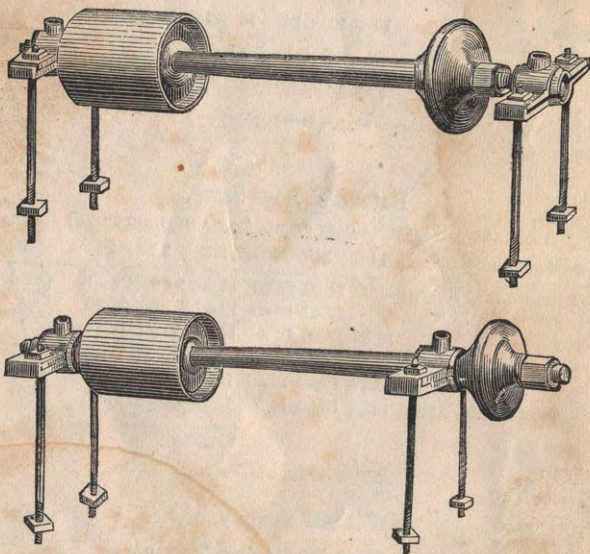
Length	10	10½	11	11½	12	inches.
Price,	\$9 50	10 00	10 50	11 50	12 50	per dozen.

## Circular Saw Mandrels.

WITH PULLEYS, BABBIT METAL BOXES, AND BOLTS COMPLETE.

No.	Size of Hole in Saw.	Size of Saw.	Length of Mandrel.	Price.
1,	$\frac{1}{2}$ inch,	4 to 5 inch,	16 inch,	\$ 6 50
" 2,	$\frac{3}{4}$ "	6 "	17 "	7 50
" 3,	$\frac{7}{8}$ "	7 to 9 "	18 "	9 00
" 4,	1 "	10 to 12 "	20 "	10 33
" 5,	$1\frac{1}{8}$ "	14 "	22 "	11 00
" 6,	$1\frac{1}{4}$ "	16 to 18 "	24 "	11 40
" 7,	$1\frac{3}{8}$ "	20 to 22 "	26 "	11 70
" 8,	$1\frac{1}{2}$ "	24 "	28 "	13 35
" 9,	$1\frac{3}{4}$ "	26 to 30 "	32 "	14 00
" 10,	$1\frac{7}{8}$ "	32 to 36 "	36 "	16 00

Larger sizes made to order. In ordering Mandrels, please state the exact size of hole in saw.



This pattern is arranged for the flange to run outside the boxes, as the saw can then be removed without shifting the mandrel from its bearings.